Creating clear and effective scientific figures

September –November 2022 (see below)

The Box (W7), Wiener Str. 7
Leibniz Centre for Tropical Marine Research (ZMT) GmbH
Fahrenheitstraße 6, 28359 Bremen, Germany

Aims

This short course will enable you to recognize and implement useful elements of visualizing scientific results. It will also enable you to create clear scientific figures with one of several tools. You will work on a figure for one of your publications or your thesis. We hope that after this course you will have improved this figure and clarified its message.

Course format

The course format is a mix of interactive workshops, lectures, and self-directed work. The course will take place in person at ZMT. We will have a joint start and ending session. In between, we offer four "technical" sessions that will teach you about a specific tool/approach for making figures. While everyone should attend the start and ending session, you can choose which of the technical sessions to attend depending on your needs and tools you plan to use. In between sessions, you can work on improving one of your figures or visualizations using the knowledge from the course.

Schedule

1. **Wednesday, September 28. 10:00-12:00**: Introduction: "Join us for a hands-on and interactive introductory workshop on the do's and don'ts of making figures!" with Steve Doo
2. **Thursday, October 06. 14:00-17:00:** "The grammar of graphics: Effective data visualization in **R** with ggplot2 (or the Python implementation plotnine)" with Fridolin Haag
3. **Thursday, October 20. 14:00-17:00**: "Let's pyth things up. **Python** plotting for beginners." with Irene Kruse
4. **Thursday, October 27. 10:00-12:00:** "In this session, you will learn all basics of what makes a good **map** - and create your own. Ready to space up your publications?" with Alexandra Nozik
5. **Friday, November 4. 9:30-12:30:** "In this session you will learn to work with your data in the statistics software **JMP** (SAS). We will cover the import of data, basics of making plots using the graph builder tool" with Christiane Schmidt
6. **Tuesday, November 8. 11:00-13:00** (after palaver) Closing workshop: "Discussion of our improved figures and lessons learned" with everyone

Target audience

- ZMT PhD students
- Postdocs & master's students will also be invited
- Maximum 16 participants? Or unlimited?

Format

- Joint start and ending, in between "technical" sessions that are optional, everyone can participate according to their needs
- Mix of interactive workshop, lecture, and self-directed work
- Participants work on their own figure or visualization in between (if they have none, they could pick a dataset from here: https://github.com/rfordatascience/tidytuesday)
- Provide a forum where people can exchange with each other
- Slack / Zulip channel for peer-to-peer exchange in between sessions

Credit

Attending at least 90% of the sessions is required. It is not possible to attend only single sessions. You can receive a certificate of attendance for the course